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ABSTRACT

The Behavioral Objectives Writing Skills Test (BOWST) was designed to provide an estimate of the elementary teacher's ability to write behavioral objectives. This instrument, which requires the teacher to develop three behavioral objectives for each of four hypothetical classroom settings, has wide utility as a teacher-training tool. It may be administered as both a pre- and post-test in either in-service or pre-service programs which attempt to measure the ability of teachers to write behavioral objectives. The BOWST has the following advantages as a measuring instrument: (1) extensive preparation is not needed for its administration or scoring; (2) it is untimed and therefore is not a speed test; (3) no oral response is required; and (4) alternate forms of the test are provided to facilitate repeated measures. The test construction, test development studies, and directions for administering and scoring the test are presented. Forms A and B of the test are provided.
(Author/DB)

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Behavioral Objectives Writing Skills Test

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General Information

The Behavioral Objectives Writing Skills Test (BOWST) was designed to provide an estimate of the elementary teacher's ability to write behavioral objectives.

This instrument, which requires the teacher to develop three behavioral objectives for each of four hypothetical classroom settings, has wide utility as a teacher training tool. It may be administered as both a pre- and post-test in either in-service or pre-service programs which attempt to measure the ability of teachers to write behavioral objectives.

The BOWST has the following advantages as a measuring instrument:

- (1) extensive preparation is not needed for its administration or scoring;
- (2) it is untimed and therefore is not a speed test; (3) no oral response is required; and (4) alternate forms of the test are provided to facilitate repeated measures.

Test Construction

For the purpose of assessing elementary teachers' abilities to write behavioral objectives, the Behavioral Objectives Writing Skills Test (BOWST) was developed. The BOWST was composed of a total of four hypothetical class settings, one in each of the four following curriculum areas: reading, arithmetic, science, and social studies. The teachers were asked to develop three behavioral objectives for each of the four hypothetical settings. Successful completion of a behavioral objective was dependent upon the inclusion of the following specified criteria: (1) terminal behavior which describes the type of behavior that is to occur as a result of planned instruction; (2) external conditions which tell the setting under which a specified behavior will occur; and (3) acceptable performance which tells the level of performance that will be accepted.

Test Development Studies

The following studies were conducted to determine the validity and reliability of the BOWST.

Validity Studies

Test validity, which is the extent to which a test measures what it is purported to measure, was studied in the following manner:

1. The first test development study attempted to determine the content validity of the BOWST. The assessment of this type of validity is based on an analysis of the relationship between the content that a specific test is said to cover and the actual content and abilities that it does cover. In order to establish content validity, the following materials were mailed to thirty-four persons who have evidenced through articles, lectures, etc., knowledge in the areas of measurement and behavioral objectives: (1) copies of both forms of the BOWST; (2) test and scoring directions; and (3) a test development explanation sheet. These specialists were asked to complete and return a test evaluation questionnaire in order to offer critical reactions to the content validity of this instrument. Upon receiving the returned evaluation questionnaires, a careful analysis was made of these opinions. Several revisions were based on the judgments of the surveyed group.
2. Another test development study to examine the content validity of the BOWST was also carried out. It was hypothesized that this instrument could measure teacher ability

to write behavioral objectives. In order to assess the content validity of the BOWST, it was administered to two populations differing in ability to write behavioral objectives. The population for this study consisted of fifty-four persons: seventeen graduate students trained in writing behavioral objectives, and thirty-seven elementary teachers who had no prior training in the writing of behavioral objectives. It was hypothesized that there would be a relationship between prior training and ability to write behavioral objectives. After the tests had been scored, a one-way analysis of variance was computed between the mean scores of trained and untrained persons to determine if the BOWST did indeed measure the ability to write behavioral objectives. Results of this one-way analysis of variance appear below.

Table 4
Mean Scores of Trained and Untrained Persons

Variable	Group Mean	
	Trained	Untrained
Terminal Behavior	11.6471	0.8919
External Conditions	11.7059	4.5404
Acceptable Performance	8.9412	2.343
Total BOWST Score	32.2941	13.7027

Trained = 17 Subjects
Untrained = 37 Subjects

Results indicated that there were highly significant differences between trained and untrained persons in their abilities to develop the total behavioral objective and highly significant differences between trained and untrained persons in their abilities to develop each of the three criteria of a behavioral objective, i.e. terminal behavior, external conditions, and acceptable performance.

Table 5
One Way Analysis of Variance
Between Mean Scores of Trained and Untrained Population

Variable Analysis	Source	Mean Square	D.F.	F-Ratio	P
Terminal Behavior	Total	17.2610	53		
	Groups	263.3834	1	21.024	0.0001 *
	Error (G)	12.5279	52		
External Conditions	Total	24.4072	53		
	Groups	598.0407	1	44.507	0.0000 *
	Error (G)	13.4369	52		
Acceptable Performance	Total	21.0384	53		
	Groups	509.9878	1	43.830	0.0000 *
	Error (G)	11.6356	52		
Total BOWST Score	Total	155.1950	53		
	Groups	4026.0742	1	49.855	0.0000 *
	Error (G)	80.7550	52		

* significant $< .05$ level

Trained = 17 Subjects
Untrained = 37 Subjects

Concurrently with the validity studies, the following test development studies were conducted to determine form and rater reliability:

Reliability Studies

Test reliability, or consistency, was studied in the following manner:

1. The first reliability study was conducted to determine if: (1) different scorers arrived at the same scores; and (2) training in writing behavioral objectives is needed to reliably score the tests.

After the BOWST had been completed by the fifty-four persons in the second validity study described earlier, it was scored by four raters and the researcher. Two of the raters had previous training in the development and utilization of behavioral objectives, and two raters had no such prior training. The four raters who scored the tests were doctoral students in various fields of Education at Indiana University.

After the scores were compiled, correlations were computed between the scores assigned by each rater and the researcher. Correlations appear in the following table.

Table 6

Correlations of Rater Scores

* 1 = Expert Rater ; 2 = Non Expert Rater ; 3 = Expert Rater
4 = Non Expert Rater ; 5 = Researcher.

	1	2	3	4	5
<u>Total BOWST Scores</u>					
1	1.0000	0.9948	0.9957	0.9970	0.9947
2		1.000	0.9958	0.9957	0.9947
3			1.0000	0.9988	0.9981
4				1.0000	0.9980
5					1.0000
Means	19.6111	19.8148	19.3519	19.4630	19.5556
<u>Terminal Behavior Scores</u>					
1	1.000	0.9897	0.9685	0.9767	0.9744
2		1.0000	0.9787	0.9822	0.9816
3			1.0000	0.9876	0.9796
4				1.0000	0.9783
5					1.0000
Means	8.4259	8.6111	8.3704	8.5000	8.3889
<u>External Conditions Scores</u>					
1	1.000	0.9878	0.9859	0.9850	0.9847
2		1.0000	0.9872	0.9862	0.9837
3			1.0000	0.9958	0.9928
4				1.0000	0.9949
5					1.0000
Means	6.6296	6.6111	6.7037	6.6852	6.7963
<u>Acceptable Performance Scores</u>					
1	1.0000	0.9830	0.9856	0.9861	0.9789
2		1.0000	0.9752	0.9758	0.9681
3			1.0000	0.9945	0.9920
4				1.0000	0.9919
5					1.0000
Means	4.5556	4.5926	4.2778	4.2778	4.4074

2. The fourth test development study was conducted to determine the reliability of forms A and B of the BOWST. A total sample of fifty-four subjects previously described were administered either form A or B of the BOWST.

Twenty-five subjects completed form A while twenty-nine subjects completed form B. A one-way analysis of variance was computed between the total test scores for each form and also on the total scores for each criteria level: terminal behavior, external conditions, and acceptable performance. Results of the one-way analysis of variance are included in Table 7.

Table 7

Mean Scores of Persons Completing
Either Form A or B of the BOWST

Variable	Group Mean	
	Form A	Form B
Terminal Behavior	9.0400	7.8276
External Conditions	7.6000	6.1034
Acceptable Performance	4.4400	4.3793
Total BOWST Score	21.0800	18.2414

Form A = 25 Subjects

Form B = 29 Subjects

Results indicated that there were no significant differences on either total terminal behavior or total external condition scores for either form of the test. However, this analysis of the data did indicate that there were significant differences between the total mean acceptable performance scores of elementary teachers having completed form A or B of the BOWST. There were also significant differences found between teachers' total mean scores on the BOWST.

Table 8
One-Way Analysis of Variance
Between Mean Scores on Forms A and B

Variable Analysis	Source	Mean Square	D.F.	F-Ratio	P
Terminal Behavior	Total	17.2610	53		
	Groups	19.7354	1	1.147	0.2892
	Error (G)	17.2134	52		
External Conditions	Total	24.4672	53		
	Groups	30.0696	1	1.234	0.2710
	Error (G)	24.3594	52		
Acceptable Performance	Total	21.0384	53		
	Groups	0.0495	1	0.002	0.9608 *
	Error (G)	21.4421	52		
Total BOWST Score	Total	155.1950	53		
	Groups	108.1830	1	0.693	0.5861 *
	Error (G)	156.0990	52		

* Significant < .05 level

Form A = 25 Subjects
Form B = 29 Subjects

The researcher was cognizant of the possibility that in randomly assigning the total population to either form of the test, the group of trained persons might not have been unevenly distributed. Therefore, a two-way analysis of variance was computed between examinees and forms. The total sample of fifty-four persons was now divided into groups of trained and untrained participants with designation being made to which form of the test they had completed.

This study was conducted to determine if there were significant differences between Forms A and B or merely between trained and untrained participants' abilities to complete the forms.

Results of this two-way analysis of variance indicated that there was no significant difference found between forms A and B when the populations completing the forms were classified respectively as trained or untrained participants. This two-way analysis of variance indicated that the reason for variance found between forms on the earlier one-way analysis was that more trained persons had taken form A than form B of the BOWST.

Results of the two-way analysis of variance appear in the following table:

Table 9

Two-Way Analysis of Variance
Between Forms and Examinees

Variable Analysis	Source	Mean Square	D.F.	F-Ratio	P
Terminal Behavior	Total	16.967	53		
	A	252.402	1	19.7570	0.0002
	B	4.322	1	0.3383	0.5703
	AB	3.753	1	0.2938	0.5967
	Error (G)	12.775	50		
External Conditions	Total	23.948	53		
	A	578.277	1	42.8524	0.0000
	B	3.033	1	0.2248	0.6426
	AB	13.177	1	0.9764	0.6711
	Error (G)	13.495	50		
Acceptable Performance	Total	21.283	53		
	A	512.551	1	44.8477	0.0000
	B	13.708	1	1.1995	0.2783
	AB	30.284	1	2.6498	0.1060
	Error (G)	11.429	50		
Total BOWST Score	Total	153.078	53		
	A	3935.803	1	48.5768	0.0000
	B	0.078	1	0.0010	0.9739
	AB	126.160	1	1.5571	0.2156
	Error (G)	81.022	50		

A = Examinee

B = Form

AB = Interaction

Directions for Administering and Scoring

The administration and scoring of the Behavioral Objectives Writing Skills Test (BOWST) requires no special preparation other than familiarity with the scoring procedure. If the scoring key is strictly observed, the test does not necessarily have to be scored by only persons with training in writing behavioral objectives.

Directions for administering and scoring forms A and B of the BOWST are identical.

Test Materials

The test kit includes: (1) forms A and B of the BOWST, (2) scoring key procedure, (3) scoring sheet.

Time Requirements

Approximately 55 minutes are required for completion of this untimed test. After the examinee receives either form A or B of the BOWST, he works at his own speed until completion.

Test Administration

Test administration of the BOWST is relatively simple. Upon receiving the test kit, the administrator dispenses the test form to the examinee who in essence self administers his own test. This occurs by the examinee's reading of the directions and proceeding at his own pace until the test is completed.

Scoring the Test

The highest possible score for this test is thirty-six points. This score can be achieved by writing three behavioral objectives for each of the four lesson plans.

Each behavioral objective is scored as follows: One point is given for each of the three criteria included in the behavioral objective. These

criteria are: external conditions, terminal behavior, acceptable performance.

A. EXTERNAL CONDITIONS

One point is given for each correct statement of the external conditions which tell when the acceptable behavior will occur.

Examples of correct statements of external conditions are:

1. Given a set of criteria...
2. Given a list of...
3. Given a specific...
4. Without the aid of...

These statements are correct because they describe the exact settings or conditions that will be present when the learner exhibits the terminal behavior.

The following examples are statements of incorrect external conditions:

1. To be able to...
2. To have knowledge of...
3. To learn by...

These examples are incorrect because they do not state the exact conditions under which the behavior will occur. The statement of external condition should answer the following question:

When will the desired behavior occur?

B. TERMINAL BEHAVIOR

One point is to be given for each correct statement of terminal behavior which tells what type of behavior will be accepted as evidence that the learner has achieved the stated objective. Examples of correct statements of terminal behavior are:

1. The learner is able to identify...
2. The learner is able to list...
3. The learner is able to recite...

An accepted statement on terminal behavior will be one that describes the behavior in such a way that it cannot be misinterpreted. It states the exact behavior that will be exhibited, i.e. list, identify, recite. It must clearly state some behavior to be displayed by the learner when he has reached the goal.

Examples of incorrect statements of terminal behavior are:

1. The student knows...
2. The student will enjoy...
3. The student appreciates...
4. The pupil believes...

These are incorrect statements of terminal behavior because they cannot be adequately measured. The teacher must designate more specifically how the child may exhibit what he knows, appreciates, or believes. The statement describing what the student will be doing when he is exhibiting a specified skill is the statement of terminal behavior.

The statement of terminal behavior should answer the following question:

What type of behavior will be accepted as evidence that the learner has achieved the stated objective?

C. ACCEPTABLE BEHAVIOR

One point is to be given for each statement of acceptable performance which indicates how well the learner must perform a specified task for it to be considered acceptable. Some examples of correct statements of performance are:

1. ... at least ten of the following problems...
2. ... those appropriate to the discussion...
3. ... the five elements in three minutes...
4. ... 40% of the basic sight words...
5. ... all of the addition problems on page 206...

These statements are correct because they tell how well the learner must perform before his behavior will be acceptable. Exclusion of the acceptable performance will occur more often than will incorrect statements. The acceptable performance may be better illustrated within a behavioral objective. For the purpose of further clarity the following behavioral objectives are stated and the acceptable performance measures are underlined.

Given a list of basic sight words, the child will be able to identify at least three words that rhyme with "can".

Given fifty spelling words orally presented by the teacher, the child will be able to write down, with correct spelling, at least 80% of the words.

The statement of acceptable performance should answer the following question:

How well must a learner perform a specified task for it to be considered acceptable?

Each form of the BOWST is composed of a total of four hypothetical class settings, one setting in each of the four specified curriculum areas. Persons taking the test are asked to develop three behavioral objectives for each of the four settings. Each objective is then examined for the inclusion of the three criteria necessary for developing a behavioral objective. The maximum number of points for an examinee is, therefore, thirty-six. This is arrived at by multiplying the number of behavioral objectives to be written for each setting (3), times the number of curriculum areas (4), and then multiplying this product times the number of criteria included in each developed behavioral objective (3). This would result in $3 \times 4 \times 3 = 36$.

The following table outlines the two basic dimensions of the BOWST.

Table 1

Dimensions of the BOWST

CURRICULUM AREAS:

READING	3 pts possible	3	3	9
ARITHMETIC	3	3	3	9
SCIENCE	3	3	3	9
SOCIAL STUDIES	3	3	3	9

CRITERIA:

T	B		C		P		
E	E	12	O	12	E	12	=
R	H		N		R		
M	A		D		F		
I	V		I		O		
N	I		T		R		
A	O		I		M		
L	R		O		A		
			N		N		
					C		
					E		

36 total points

From this test it is possible to determine each teacher's ability to write behavioral objectives in each of the four curriculum areas. The total possible score for these four areas would be nine points. This is arrived at by multiplying the number of behavioral objectives to be written for a specific curriculum area (3) times the number of criteria for rating each behavioral objective (3). This would result in $3 \times 3 = 9$.

In addition, it is possible to determine each teacher's ability to write behavioral objectives which include each of the three stated criteria. The total possible score for each of these three areas is twelve points. This is arrived at by determining whether each of the twelve behavioral objectives met one of the three specific criteria. A maximum score of twelve points is possible for each specific criteria area. This would result in $12 \times 1 = 12$.

Finally, it is possible to determine each teacher's ability to write behavioral objectives in each of the four curriculum areas according to one of three criteria. The total possible score for each of these two dimensional areas would be three points. This is arrived at by assessing the three behavioral objectives according to one of the three criteria. This would result in $3 \times 1 = 3$.

The BOWST, therefore, is composed of a total score of thirty-six points and nineteen sub-scores ranging from three to nineteen points. The following table presents a detailed outline for the BOWST.

Table 2
Outline for the
Behavioral Objectives Writing Skills Test

	Number of Objectives	Criteria	Sub Score	Total
A. Developing behavioral objectives in:				
1. Reading	3	3	9	
2. Arithmetic	3	3	9	
3. Science	3	3	9	
4. Social Studies	3	3	9	
				36
B. Developing behavioral objectives to meet specific criteria:				
1. Terminal Behavior	12	1	12	
2. Conditions	12	1	12	
3. Performance	12	1	12	
				36
C. Interaction between subject matter area and criteria:				
1. Reading--Terminal Behavior	3	1	3	
Reading--Conditions	3	1	3	
Reading--Performance	3	1	3	
2. Arithmetic--Terminal Behavior	3	1	3	
Arithmetic--Conditions	3	1	3	
Arithmetic--Performance	3	1	3	
3. Science--Terminal Behavior	3	1	3	
Science--Conditions	3	1	3	
Science--Performance	3	1	3	
4. Social Studies--Terminal Behavior	3	1	3	
Social Studies--Conditions	3	1	3	
Social Studies--Performance	3	1	3	

BEHAVIORAL OBJECTIVES WRITING SKILLS TEST

FORM A.

DIANE LAPP

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TEST DIRECTIONS

The following test consists of hypothetical class situations and procedures that could be utilized in developing a lesson or unit of study for a class session or sessions. A total of four situations are presented, consisting of one in each of the following subject areas: reading, arithmetic, social studies, and science. For each general situation you are asked to develop three behavioral objectives or a total of twelve behavioral objectives in all. This does not mean that you would necessarily plan to accomplish all three of these objectives within the same class period.

Please utilize the following definition of a behavioral objective in each of your twelve responses: A behavioral objective is a statement that tells the conditions under which a specified behavior will occur, the type of behavior that is to occur as a result of planned instruction, and the performance level that will be accepted.

After reading the content of each situation, write three behavioral objectives that you feel could be accomplished for an individual pupil or a group of pupils. No predetermined objectives or grade levels have been developed for these plans so as to be easily adaptable to any grade level. This test is untimed.

READING:

Even though your reading group will approach completion of their basal text, you feel that many of the children have not mastered their new vocabulary words. This, of course will interfere with their comprehension of the text. You will review these new words with the children, allowing them to identify the words in a contextual setting; that is, you will want the group to recognize new words in phrases or sentences.

Another of your broad goals will be for the children to identify a synonym or offer a simple definition of the new vocabulary words. Perhaps those children requiring less practice with word identification will be able to form their own new word lists by combining words into compound words. They may also add prefixes and suffixes to the already known root word. All of this practice, you believe, will increase the group's readiness for the next level text.

Please write three behavioral objectives for this lesson. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

ARITHMETIC:

You will develop a unit on percentages and their relevance to the child's daily life. The majority of examples and problems will be posed by the life situations of the child rather than by a textbook.

You will have decided that the first lesson will involve a discussion of the students pets. The total number of students having pets will be the basis for the percentage problems. After obtaining this total, the students will be calculating the percentages of specific varieties of pets owned by the students themselves.

You will have decided that the children will conduct a poll of the pets in the entire school. The class will be divided into several groups with a certain percentage of the class in each group. It will be the responsibility of the group to go to two other classrooms and collect the information for the poll. They will also compute the percentages in the same manner as you will have indicated earlier. At the end of a given length of time, each of the groups will report their findings to the rest of the class and will chart the percentages on a graph.

An extension of this unit could include a categorization of the pets into specific breeds and then computation of the percentages. Through the lessons planned for this unit, you feel the children will gain a practical understanding and knowledge of percentages.

Please write three behavioral objectives for this unit. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

SCIENCE:

You need to increase your students' knowledge and practice of good oral hygiene habits. It's Dental Health Week and time for an all-out campaign for increased oral hygiene. You wish to promote your students' regular brushing and dental visits. Record keeping will play an important role. Children will record not only their toothbrushing habits, but also keep records of between meal snacks, and amounts of water consumed.

You feel that a historical prologue can lead the children to list modern dental aids from the electric drills to striped toothpaste. They should be able to role play a visit to the dentist and give demonstrations as to proper brushing techniques. The children can draw and label parts of the mouth as well as apply labels to all teeth. They should be able to distinguish the function of various kinds of teeth such as incisors, molars, etc.

Through recognition of the functions of various kinds of teeth, the child should realize the importance of proper care and maintenance of teeth.

Please write three behavioral objectives for this lesson. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

SOCIAL STUDIES:

"Living in Japan" is the title of the unit you will select to present to your social studies class. The first lesson will deal with very basic information about Japan; its location and size in relation to the United States.

Since involvement will be so essential to the learning atmosphere of the child, you will have decided to arrange the room environment to include aspects of Japanese homes, people, clothing, food, or geographical settings.

A wealth of materials will be available on Japan because of Expo '70. The students will be encouraged to keep notebooks of the numerous clippings they will be seeing in the papers and magazines. You plan that through this experience each child will have an opportunity to gain information and have something to share and discuss with the class.

You will ask the Junior Red Cross to supply you with the name of a school in Japan so that your school can correspond with a type of sister school. The children will also be encouraged to write to the Japanese students as penpals if they wish. You will speak to several room mothers about the possibility of having a Japanese tea time at the conclusion of your unit.

Such an experience will help your students to think more realistically about the life experiences of the people they will be reading about in Japan.

Please write three behavioral objectives for this unit. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

BEHAVIORAL OBJECTIVES WRITING SKILLS TEST

FORM B

DIANE LAPP

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TEST DIRECTIONS

The following test consists of hypothetical class situations and procedures that could be utilized in developing a lesson or unit of study for a class session or sessions. A total of four situations are presented, consisting of one in each of the following subject areas: reading, arithmetic, social studies, and science. For each general situation you are asked to develop three behavioral objectives or a total of twelve behavioral objectives in all. This does not mean that you would necessarily plan to accomplish all three of these objectives within the same class period.

Please utilize the following definition of a behavioral objective in each of your twelve responses: A behavioral objective is a statement that tells the conditions under which a specified behavior will occur, the type of behavior that is to occur as a result of planned instruction, and the performance level that will be accepted.

After reading the content of each situation, write three behavioral objectives that you feel could be accomplished for an individual pupil or a group of pupils. No predetermined objectives or grade levels have been developed for these plans so as to be easily adaptable to any grade level. This test is untimed.

READING:

"Squanto and the Pilgrims" will be the title of a story in your reading group. The historical nature of this lesson will allow for the opportunity to teach and reinforce study skills.

Rather than confine the lesson to the classroom, you will take the children to the library and teach them to use the card catalogue and encyclopedias to find further information about this period in history. Here will be a good opportunity to refresh alphabetization skills. This will also offer the students an indirect opportunity to digest, organize, or classify information about the Pilgrim forefathers.

You will find that an aid to accomplishing these skills will be through the preparation of written or oral reports using several sources. You will hope that the children read broadly, will note and evaluate discrepancies in accounts, and will be able to discuss their findings. In short, you will hope that this lesson provides an opportunity for involvement through reading.

Please write three behavioral objectives for this lesson. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

ARITHMETIC:

Rather than isolating your presentations in math and social studies you will correlate these two areas into a unit dealing with several aspects of Japanese culture.

After discussing the types of houses in Japan, you will decide that the children should design Japanese houses using multiples of 3×6 for room construction.

Since you will have discussed time tables in math, you will decide to use time tables for computing the transportation times between the school and a principle city in Japan. This will include transportation by airplane, train, and boat.

The children will be asked to think of other aspects of Japan and its culture to compare and calculate. An example of this might be to compare Japan's area and population with that of the United States. Since you will have discussed an aspect of the population, perhaps the children could also learn about the Japanese currency and compare its value to American currency. Watching the interactions of disciplines in a foreign culture may better enable the student to be able to discover the interactions of disciplines within a familiar situation.

Please write three behavioral objectives for this lesson. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

SCIENCE:

With the coming of Spring, your class will decide to plant a garden. Each child will be given the responsibility of bringing two varieties of seeds from home. Many of the seeds will be labeled when they are planted.

After the plants have sprouted, the children may begin to notice how rapidly some of the plants grow. Each student will be expected to keep a daily log of each plant variety's general growth rate while also noting the different colors and shapes of each sprout.

Within a few days the children will begin to learn the parts of the plants and identify flowers, leaves, stems, and roots. Books placed in the classroom will aid children in learning these identifications. Leaves can be grouped and organized according to shape, size, or other schema. You will plan to have the children develop classification schemas of their own and record them in their progress logs. Roots will be extracted and examined under a microscope. Student class reports will be given about the function and nature of plant roots. Charts, drawings, and graphs as well as the daily logs could result from systematic observation.

Please write three behavioral objectives for this lesson. If adequate space has not been provided, use the backside of this sheet.

1. _____

2. _____

3. _____

SOCIAL STUDIES:

"Pueblo Indians" is the title of the unit you will have selected to use with your social studies class. The first lesson will deal with the life style of the Pueblo Indian.

You will ask a guest speaker who is familiar with the activities of the Pueblo Indians to discuss the type of work done by various tribe members. After such an experience the children will be able to role play various experiences i.e. preparing corn to be dried, grinding corn for piki bread, and baking bread.

The music teacher will cooperate with you by teaching the children several Pueblo Indian songs. You will plan to present records which will give the children insight into the type of music and dances enjoyed by these people. You will secure a film which deals with the family relationships of the Pueblo Indian. During one class session several of the students will act out a short drama portraying the family they have just studied.

Through these experiences you feel the children will be able to compare the music, working conditions, and family relationships of the Pueblo Indians with similar situations in their home.

Please write three behavioral objectives for this lesson. If adequate space has not been provided use the backside of this page.

1. _____

2. _____

3. _____

SCORING SHEET

Place a score of "1" in each square if the behavioral objective includes the criteria for the column. If it does not include the criterion, leave the square blank. Total the columns and the rows.

LESSON PLANS	Terminal Behavior	External Conditions	Acceptable Performance	TOTALS
READING				
Behavioral Objective #1				
Behavioral Objective #2				
Behavioral Objective #3				
ARITHMETIC				
Behavioral Objective #1				
Behavioral Objective #2				
Behavioral Objective #3				
SOCIAL STUDIES				
Behavioral Objective #1				
Behavioral Objective #2				
Behavioral Objective #3				
SCIENCE				
Behavioral Objective #1				
Behavioral Objective #2				
Behavioral Objective #3				
TOTALS				